Maintenance Interval Schedule
(Standby Generators)

Notes:

- This is a basic generic list. Manufacturers recommendations should be followed and supersede recommendations in this list.
- Before each consecutive interval is performed, all maintenance from the previous intervals must be performed.

A. Quarterly Schedule

1. Conduct visual inspection around generator.
    - Check for evidence of leaks, damage, loose or missing hardware.
    - Inspect engine and generator wiring harness for wear and damages.
    - Inspect supports and spring isolators for soundness and stability.
    - Inspect unit for corrosion.
    - Hoses and Clamps - Inspect/Replace if needed.
    - Belts - Inspect/Adjust/Replace if needed.
    - Inspect all fuel, oil, and water piping for secure mounting.
    - Inspect exhaust piping and muffler insulation.
2. Batteries.
    - Battery charger – Inspect operation and clean.
    - Battery electrolyte level and specific gravity – Check and adjust. Add distilled water as needed.
    - Perform battery load test.
    - Clean battery terminals and lugs (apply grease on terminal connections).
3. Fluids and Filters.
    - Cooling System Coolant Level - Check and adjust.
    - Coolant conditioner (DCA/SCA) – Check and adjust to specs.
    - Jacket Water Heater - Check proper operation.
    - Engine Oil Level - Check and add if needed.
    - Fuel/water separators – Drain water.
    - Engine Air Cleaner Service Indicator – Check, clean filter if needed.
4. Generator Room.
    - Fuel tanks – Inspect and treat fuel if needed, check fuel level, drain water and sediment.
    - Automatic fuel system -Check operation and control panel.
    - Space Heater/Room exhaust fan - Check for proper operation.
    - Air intake/exhaust – Ensure nothing obstructs airflow; louvers are free and operate properly.
    - Exhaust condensate trap – drain condensate.
5. Control Panel.
    - Electrical Connections - Check tightness
    - Clean and remove dust from panel.
6. ATS.
    - Clean and remove dust.
    - Inspect seals.

- Note date of last battery change. (Replace if 2 years or older).
- Tighten connections.
- Check for hot spots.

7. Run unit – No load.
    - Run the generator with no load for 15 minutes.
        - Remote Start Panel-Inspect and test operation. Inspect and clean.
        - Check the generator for unusual conditions, such as: excessive vibration, leaks, excessive smoke.
        - Verify all gauges and indicators are normal and functioning properly.
        - Check all indication lights, replace any defective bulbs.
8. Start unit and run under load for 1 hour.
    - Note: Unit should be run under facility load if permissible. If not, unit should be run with a minimum 80% load with load bank.
    - Automatic Start/Stop – Inspect.
    - Check ATS operations and calibrate TDES, TDNE, TDEN, TDEC if necessary. Observe and record retransfer/cool down time.
    - Check automatic open and close shutter-stats and thermatic fans.
    - Generator Set Vibration – Inspect.
    - Read and record all gauges/meters.
    - Record load readings – Voltage, amps, frequency, power factor.
    - Check exhaust for excessive black or white smoke.
    - Check turbocharger for vibrations or any abnormal noise during operation.
    - Check generator bearing for noise and overheating.
    - Check exhaust manifold, muffler, and piping for leaks and secure mountings.
9. Additional.
    - Ensure Generator/ATS is left in proper position for automatic start and transfer.
    - Clean generator and generator room. Wash radiator if necessary.
    - Annotate date, hours and maintenance in Generator log, fill out maintenance checklist and report deficiencies to COR.
    - Perform any additional maintenance tasks as recommended in the manufacture's operation and maintenance manuals.
    - Submit Service Inspection and Test Report to COR.

B. Annual Schedule

1. Conduct Quarterly PM service
2. Engine Air Cleaner Elements – Replace.
3. Engine Crankcase Breather – Clean.
4. Engine Oil Sample - Obtain and perform analysis. Submit report to COR.
5. Engine Oil and Filter – Replace.
6. Fuel Filters and Water Separators – Replace.
7. Obtain fuel sample at day tank and storage tank for analysis.
8. Radiator – Clean (pressure wash).
9. Intake louvers and ducts – Inspect/Clean (pressure wash).
10. Fan Drive Bearing – Lubricate.
11. Magnetic Pickups - Clean/Inspect.

12. Cooling System Coolant Sample - Obtain
13. Cooling System Supplemental Coolant Additive (SCA) - Test/Add
14. Coolant filter – Change if applicable
15. Crankshaft Vibration Damper - Inspect
16. Engine Protective Devices - Check
17. Engine Valve Lash - Inspect/Adjust
18. Turbocharger – Inspect/Check; Check end play and radial clearance on the turbine wheel and shaft.
19. Clean and lubricate fuel pump linkages if applicable.
20. Fan bearing – Inspect/Grease.
21. Clean dust and vacuum all the controls, meters, switching mechanism components, interior buswork, Remote Start control panel, Annunciator and connecting lugs of the ATS.
22. Inspect/Check buswork and supporting hardware for carbon tracking, cracks, corrosion, or any type of deterioration.
23. Check all control wiring and power cables (especially wiring between or near hinged door) for sign of wear and deterioration.
24. Check the cabinet interior for loose hardware – tighten connections.

C. 2 Year Maintenance Schedule:

1. Conduct the Semi-annual and Annual PM Service.
2. Inspect water pump and seals; replace any worn or defective parts.
3. Clean and inspect the oil cooler.
4. Clean and inspect the after cooler.
5. Generator – Check for moisture, dust, oil, grease, and debris on main stator windings, exciter. Clean as needed
6. Generator bearing – Inspect/Grease (or as recommended by manufacturer).
7. Service or replace the batteries in the Digital Module every two years. (as applicable)

D. 3 Year Maintenance Schedule.

1. Cooling System Coolant – Flush system and replace coolant (Note CAT ELC coolant to be replaced every 12,000 hrs or 6 years).
2. Cooling System thermostat – Replace
3. Belts and hoses – Replace
4. Batteries - Replace
5. Generator Main Stator Winding Temperature (if equipped with winding defectors) – Check and record main stator winding temperatures with engine under load. NOTE: Nominal temperature values for stand by units are 180^0C (356^0F) for the alarm and 205^0C (401^0F) for the shutdown.
6. Generator Bearing and Bearing Bracket Temperature (If Equipped) – Check and record all bearing bracket temperatures with the engine under a load. NOTE: Nominal temperature values for the bearing bracket are 85^0C (185^0F) for the alarm and 95^0C (203^0F) for the shutdown.